GD2S02 – Software Engineering for Games

Project Tracking

Overview

- Project Tracking
  - Product Backlog
  - Sprint Backlog
  - Burn-down charts
  - Burn-up charts
  - Developer Journal
  - Daily Scrum Meeting

Product Backlog

- Prioritized list of desired functionality.
- Written in user story form.
- Effort is estimated by the team, in relative units (e.g., story points)
- May have item-specific acceptance criteria.
- User stories are written by the project stakeholders.
- The item at the top of the product backlog is the highest priority item.
- Product owner is the one responsible for prioriti & the product backlog.

Sprint Backlog

- Subset of the product backlog.
- Consists of:
  - Sprint Goal.
  - Top user stories of the product backlog, based on their estimated work effort and the estimated capacity of the team.
  - Detailed plan for the delivery of the selected items.
- Items in the sprint backlog are frozen after the sprint planning (no add/remove).
- The plan which is normally not complete at the sprint planning meeting can still be updated during the sprint.

Sprint Backlog

- If all items in the sprint backlog are done before the end of the sprint, the development team can pick the next item from the product backlog and start working on it till the end of the Sprint.

Burn-down chart

- A graph that shows the remaining effort for a given period of time.
  - The scrum team tracks how much work is left with the goal of hitting the ground.
  - Teams use the sprint burndown chart to track the effort remaining in a sprint.
- Time is shown on the horizontal axis, and the vertical axis shows the remaining work required to achieve a certain goal.

Burn-down chart example

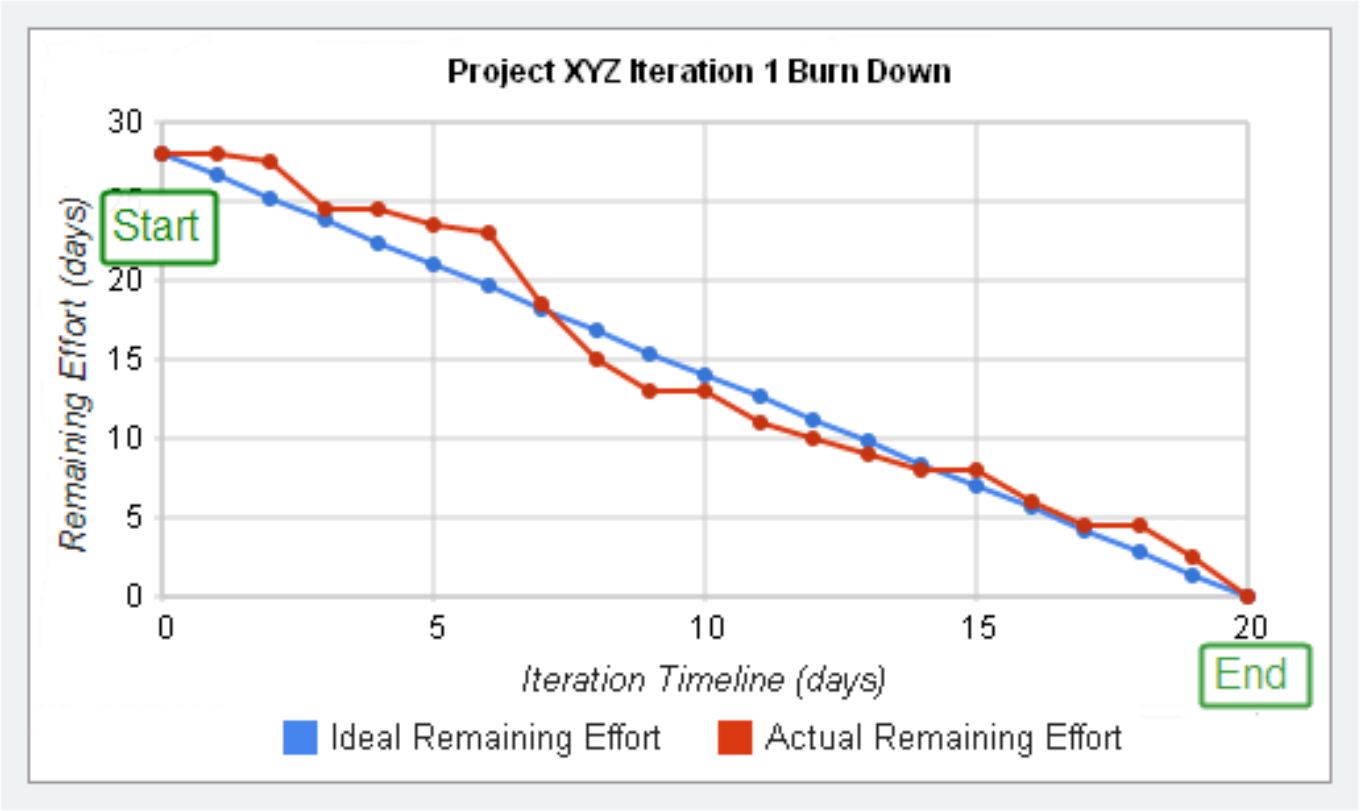
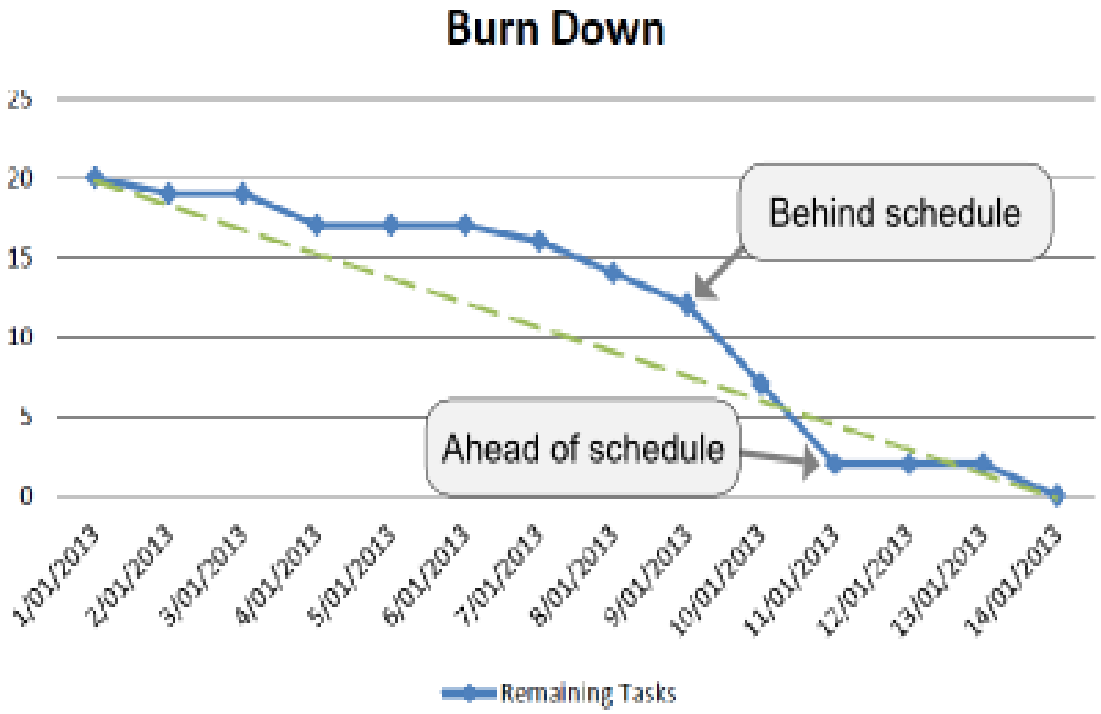


Figure. Simple burn-down chart

Figures from http://joel.inpointform.net/software-development/burn-down-charts-tutorial-simple-agile-project-tracking/
http://www.clariostechnology.com/productivity/blog/whatisaburndownchart

Burn-down chart example



A burndown chart. The

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Information for burn-down chart: Remaining Effort

Task Description	Status	Owner	Estimated Effort (in Hours)	Effort Remaining (in Hours)
POC for Story 1	In Progress	Developer	10	6
Requirement Clarification with PO	Closed		8	0
Develop modules	Open	Developer2	12	12

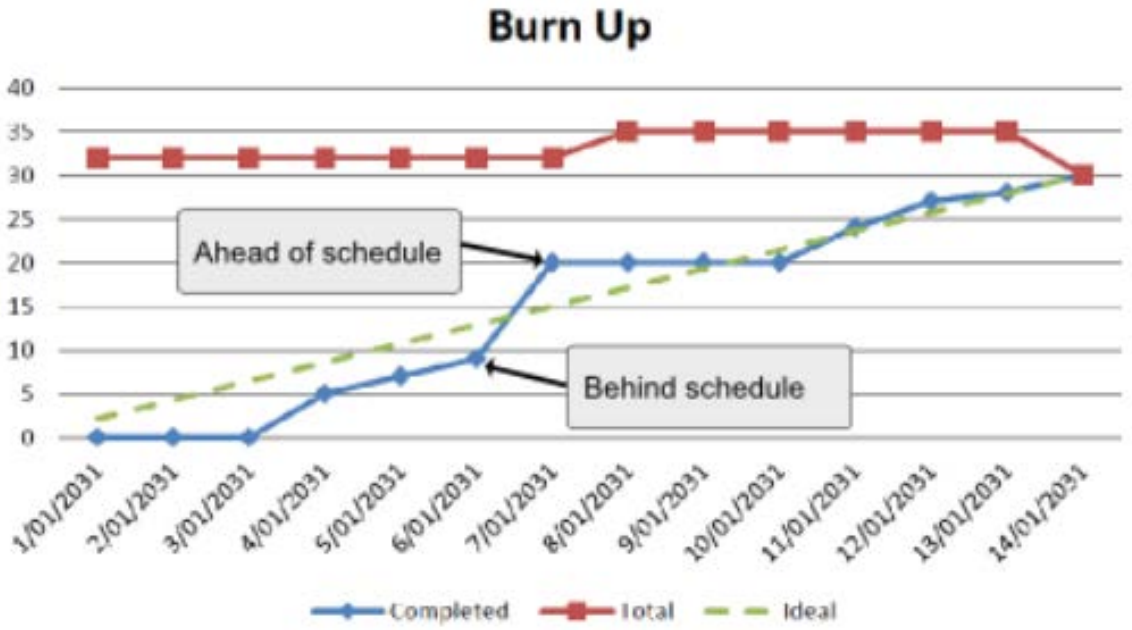
Figure. Sample from sprint backlog

- Updated daily by the team members.
- Easy to track the state of the tasks.
- It is a good idea to use burn-down charts if the amount of work is fixed.
- It the amount of work is variable you might think of [illegible] burn-up charts.

Burn-up charts

- Burn-up charts displays how much work has been completed and the total work enclosed in the project.
  - We track how much work we've completed, so the curve is going up, not down!
  - Easy to see the recently introduced tasks, scaling factors in the project.
  - Very valuable when used along with burn-down charts.

Burn-up chart example

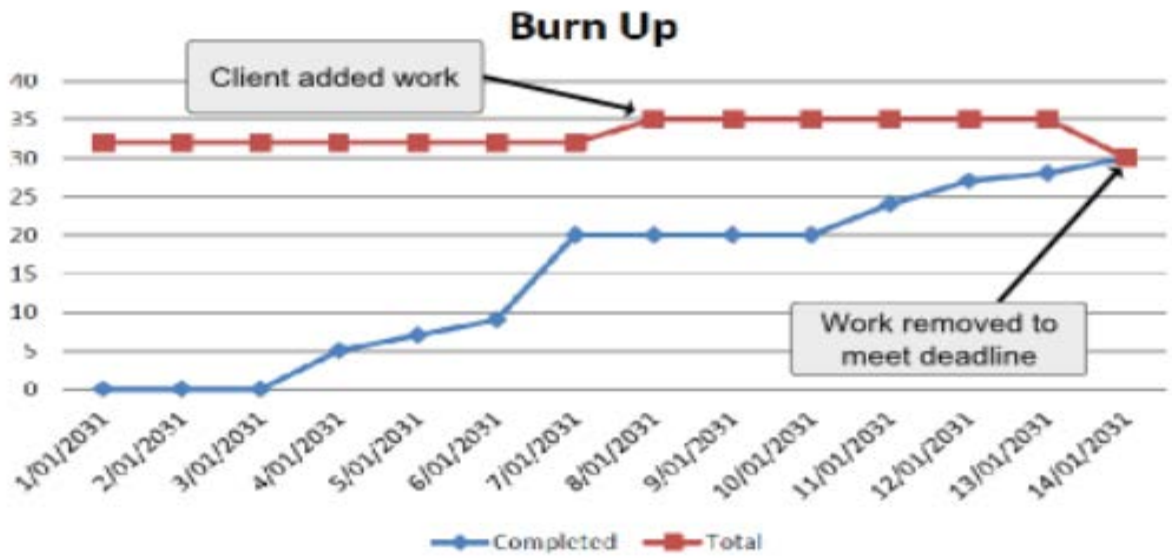


A burn up chart with an ideal line, showing where the project is ahead of and behind schedule.

Figure. Sample burn-up chart

Figures from http://www.clariostechnology.com/productivity/blog/whatisaburnupchart

Burn-up chart example

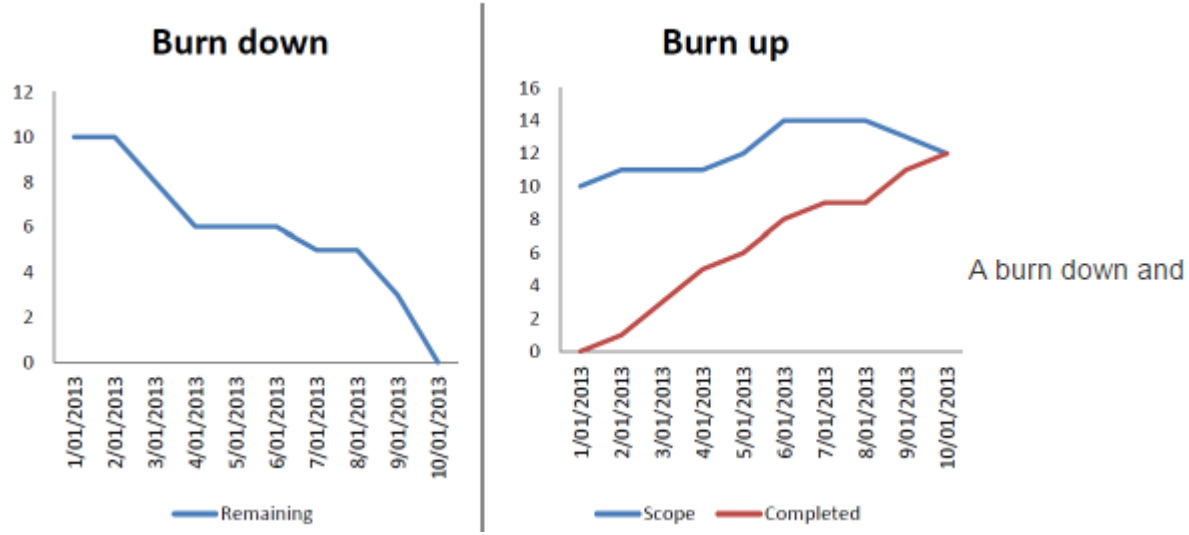


A burnup chart clearly shows both completed work and project scope. The project will be completed when the lines meet.

Figure. Sample burn-up chart

Figures from http://www.clariostechnology.com/productivity/blog/whatisaburnupchart

Burn-up Versus Burn-down



A burn down and

- The burn down chart shows that the team did not perform much in the middle, the burn up chart shows the reason for that because the project scope increased.
- The burn down chart showed that the team heroically finished at the end, while the burn up chart shows that they finished because part of the scope was removed to meet the deadline.

Burn-up Versus Burn-down

- Burn down charts are simple and easy to understand. But they can not show all information.
- Burn up charts has two separate lines for completed tasks and total work. Which helps to show valuable information such as change of scope

Why do we use charts?

- Regular review to these progress charts for the project can help identify problems and allow to control them early in the process.
- Can be used to explain and demonstrate the progress of the project and the individuals.
- Motivation for the team.
- Shows the project velocity.

Developer Journal

- What is a developer journal?
  - It is like a diary in which you write your progress, thoughts, algorithms, experience, ideas, goals, plans, ways for improvements, mistakes, lessons learned,……

Developer Journal

- Why keeping a Developer Journal?
  - Helps understand/refine your thoughts.
  - Monitor your progress.
  - Improves productivity.
  - If you are writing your journal by hand, this helps you break from staring at the computer all the time.
  - Writing down the problem you are facing, helps you better understand the reasons and think about a solution.
  - Helps keep the motivation during long-term projects.

Developer Journal

- What to write in your journal?
  - Date, time, task
  - Log of the programming tasks that you are working on
  - Problems that you have faced
    - Description
    - Reasons (possible ones)
    - Analysis
    - Possible solutions
      - When you start trying to use suggested solutions, you can record each attempt. If it fails, mention the reason. If it is not an o[illegible] solution, write the reason for that. If it succeeds, record tha[illegible] with you comments on the solution.

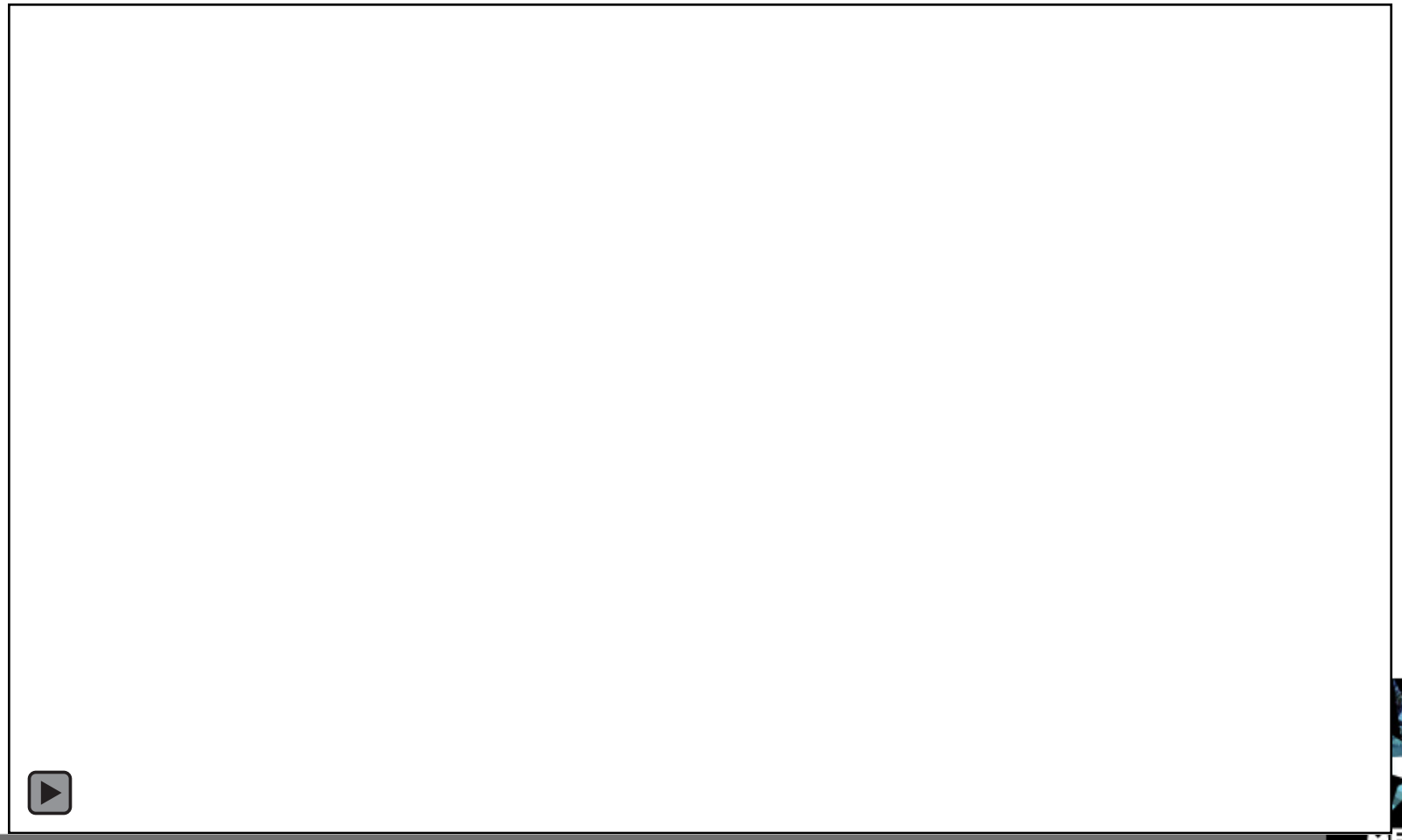
Developer Journal

- What to write in your journal?
  - Things you want to research or learn about
  - Lessons that you have learned during development.
  - Goals to achieve.

Daily Scrum Meeting

- 15 minutes meeting for quick reporting.
- What I did?
- What I will do?
- What impedes me?

Daily Scrum Meeting



Summary

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